

## ABSTRACT

In an improved amperometric gas sensor, the structure, composition, and electrode potential are adjusted so as to prevent or minimize any unwanted reactivity at the counter and/or reference electrode of any analyte or interfering component of the matrix that may cross over thereto. The sensor is preferably structured so that the product of the analyte reaction at a first working electrode can be reconverted to the original analyte at a counter electrode or at a second working electrode and then reacted again at the first working electrode, with such back-and-forth reactions repeating many times, so as to yield an amplification of the analyte signal.